

SEQUENCE LISTING

<110> DSM N.V.
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van LUIJK, Nicole
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LUITEN, Rudolf

<120> Propionibacterium Vector

<130> MBHB00-1314

<140> US 09/720,583

<141> 2000-12-22

<150> PCT/EP99/04416

<151> 1999-06-25

<150> EP 98305033.7

<151> 1998-06-25

<160> 13

<170> PatentIn version 3.0

<210> 1

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<212> DNA

<213> Propionibacterium freudenreichii LMG16545

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ttc cct gag agc tgg ctg cca cgc aag ccg ctg gcg tca gcc gag aag 341
Phe Pro Glu Ser Trp Leu Pro Arg Lys Pro Leu Ala Ser Ala Glu Lys
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Ser Gly Ala Tyr Arg His Val Thr Arg Gln Arg Ala Leu Glu Leu Pro

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Arg Asp Ala Ser Asp Ala Asp Trp Ala Ala Asp Leu Ala Gly Leu Pro			
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Ser Pro Ser Tyr Val Ser Met Asn Arg Val Thr Thr Thr Gly His Ile			
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Val Tyr Ala Leu Lys Asn Pro Val Cys Leu Thr Asp Ala Ala Arg Arg			
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Arg Pro Ile Asn Leu Leu Ala Arg Val Glu Gln Gly Leu Cys Asp Val			
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ctc gcc gcc gat gca tcc tac ggg cac cgg atc aca aag aac ccg ctc			677
Leu Gly Gly Asp Ala Ser Tyr Gly His Arg Ile Thr Lys Asn Pro Leu			
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Ser Thr Ala His Ala Thr Leu Trp Gly Pro Ala Asp Ala Leu Tyr Glu			
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His Ser Trp Gly Gly Pro Val Ala Glu Trp Glu His Thr Val Phe Glu			
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ggc ccc ctc gcc ttg aac gaa ctt aag cac tta tct cga tcc att tcc			1013
Gly Pro Leu Gly Leu Asn Glu Leu Lys His Leu Ser Arg Ser Ile Ser			
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 Gln Ser Leu Val Ile Thr Asp Arg Asp Ala Ser Asp Ala Asp Trp Ala
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 Ala Asp Leu Ala Gly Leu Pro Ser Pro Ser Tyr Val Ser Met Asn Arg
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Val Thr Thr Thr Gly His Ile Val Tyr Ala Leu Lys Asn Pro Val Cys
 85 90 95
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 Glu Gln Gly Leu Cys Asp Val Leu Gly Gly Asp Ala Ser Tyr Gly His
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 Pro Ala Asp Ala Leu Tyr Glu Leu Arg Ala Leu Ala His Thr Leu Asp
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 Glu Ile His Ala Leu Pro Glu Ala Gly Asn Pro Arg Arg Asn Val Thr
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 Arg Ser Thr Val Gly Arg Asn Val Thr Leu Phe Asp Thr Thr Arg Met
 180 185 190
 Trp Ala Tyr Arg Ala Val Arg His Ser Trp Gly Gly Pro Val Ala Glu
 195 200 205
 Trp Glu His Thr Val Phe Glu His Ile His Leu Leu Asn Glu Thr Ile
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 Ile Ala Asp Glu Phe Ala Thr Gly Pro Leu Gly Leu Asn Glu Leu Lys
 225 230 235 240
 His Leu Ser Arg Ser Ile Ser Arg Trp Val Trp Arg Asn Phe Thr Pro
 245 250 255
 Glu Thr Phe Arg Ala Arg Gln Lys Ala Ile Ser Leu Arg Gly Ala Ser
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Arg Ile Arg Glu Leu Arg Ser Glu Gly Gln Ser Met Arg Ala Ile Ala
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